

forming a gap layer of a non-magnetic material on the first insulating layer and an exposed surface of the first magnetic layer which is not covered with the first insulating layer;

forming a second magnetic layer on the gap layer such that the second magnetic layer extends over the pole portion of the first magnetic layer and further extends over a rear portion of the first magnetic layer beyond the pole portion of the first magnetic layer;

forming a third insulating layer on the second magnetic layer and an exposed portion of the gap layer which is not covered with the second magnetic layer;

polishing the third insulating layer such that a pole portion of the second magnetic layer above the pole portion of the first magnetic layer is exposed and the exposed pole portion of the second magnetic layer forms a coplanar surface with the third insulating layer;

forming a thin film coil such that a part of the thin film coil is formed on the coplanar surface of the pole portion of the second magnetic layer and the third insulating layer and is isolated by a second insulating layer;

forming a third magnetic layer on the pole portion of the second magnetic layer and the second insulating layer such that the third magnetic layer is magnetically coupled to the first magnetic layer at a rear portion remote from the pole portion; and

forming the air bearing surface by grinding end surfaces of the pole portions of the first and second magnetic layer and an end surface of the gap layer placed therebetween, while an end edge of said first insulating layer on a side of the pole portion of the first magnetic layer is utilized as a throat height zero reference position.--

--24. The method of manufacturing a thin film magnetic head as claimed in claim 23, comprising:

widening the width of the second magnetic layer at the region beyond the pole portion.--

--25. (New) The method of manufacturing a thin film magnetic head as claimed in claim 23, wherein the grinding process of the third insulation layer is performed by a chemical-mechanical grinding process.--

--26. (New) The method of manufacturing a thin film magnetic head as claimed in claim 23, wherein after forming the second magnetic layer, the method comprises:
performing an etching treatment with the pole portion of the first magnetic layer as a mask to partially remove a portion of a film thickness of the first magnetic layer to form a trim structure.--

--27. (New) The method of manufacturing a thin film magnetic head as claimed in claim 23, comprising:

arranging an electrically insulated and magnetically shielded magnetoresistive reproducing element in a magnetic resistant material film between the base substrate and the first magnetic layer so as to form a composite thin film magnetic head.--

--28. (New) The method of manufacturing a thin film magnetic head as claimed in claim 27, wherein the method further comprises:

forming a first shield layer that magnetically shields the base substrate;
embedding the magnetic resistance material film between the first shield layer and a second shield layer that is formed over the magnetic resistant material film and below the first magnetic layer; and

applying a grinding process to form the air bearing surface and the magnetoresistive reproducing element which is arranged so as to expose its end face on the air bearing surface by grinding the first shield layer and the magnetic resistance material film.--

--29. (New) A method of manufacturing a thin film magnetic head comprising:

- forming a first magnetic layer having a pole portion supported by a base substrate;
- forming a gap layer of a non-magnetic material on the first magnetic layer;
- forming a first insulating layer having a pole portion with an end edge which forms a reference position for an air bearing surface;
- forming a second magnetic layer over the pole portion of the first magnetic layer that extends to a region beyond the pole portion of the gap layer and the first insulating layer;
- forming a thin film coil having a portion supported between the first magnetic layer and the second and third magnetic layers, the thin film coil being isolated by a second insulation layer, the second insulation layer located above the first insulation layer and forming a coplanar surface with the second magnetic layer, the thin film coil being formed on the coplanar surface of the second insulating layer;
- forming a third magnetic layer on the second insulation layer, the third magnetic layer contacting the second magnetic layer on a side opposite the first magnetic layer, the third magnetic layer being magnetically coupled to the first magnetic layer at a rear position separated from the air bearing surface; and
- forming the air bearing surface by grinding in part an end face of the pole portion of the first magnetic layer and an end face of the pole portion of the second magnetic layer and the gap layer placed therebetween.--

--30. (New) The method of manufacturing a thin film magnetic head as claimed in claim 29, comprising:

- widening the width of the second magnetic layer at the region beyond the pole portion.--

--31. (New) The method of manufacturing a thin film magnetic head as claimed in claim 29, wherein after forming the second magnetic layer the method comprises:

performing an etching treatment with the pole portion of the second magnetic layer as a mask to partially remove a portion of a film thickness of the gap layer around the pole portion to form a trim structure.--

--32. (New) The method of manufacturing a thin film magnetic head as claimed in claim 29, comprising:

arranging an electrically insulated and magnetically shielded magnetoresistive reproducing element in a magnetic resistant material film between the base substrate and the first magnetic layer so as to form a composite thin film magnetic head.--

--33. (New) The method of manufacturing a thin film magnetic head as claimed in claim 32, wherein the method further comprises:

forming a first shield layer that magnetically shields the base substrate;

embedding the magnetic resistance material film between the first shield layer and a second shield layer that is formed over the magnetic resistant material film and below the first magnetic layer; and

applying a grinding process to form the air bearing surface and the magnetoresistive reproducing element which is arranged so as to expose its end face on the air bearing surface by grinding the first shield layer and the magnetic resistance material film.--

REMARKS

Claims 23-33 are pending. By this amendment, claims 11-22 are canceled and claims 23-33 are added. The subject matter of Claims 23-33 correspond to claims 11-22 respectively. Support for newly added claims 23-33 is provided in the specification and in Figs. 13a-29. No new matter has been added. The Abstract has been amended to correct